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**DEVICE FOR BEAUTY TREATMENT OF LIMBS**TECHNICAL FIELD

The present invention relates to devices for beauty treatment of human body, particularly it refers to a device for beauty treatment of limbs or other parts of the body.

The known means used by operators for executing beauty treatment of hand consist of a plurality of tools, supports and the like generally positioned on a work table and used, one after the other, during the different treatment phases of hand, particularly of fingernails.

A drawback of said known means and supports consists in that they are bulky, can be mislaid and they do not allow rationalizing and accelerating the operations to be executed on the hands.

Other drawback consists in that the possible aspirators of the known means, being generally fixed, often are not in the same position of the hand on which nail varnishes, resins and similar are applied and, therefore, said aspirator are often ineffective.

Further drawback consists in that generally said known means do not allow a quick removal, application and hardening of nail varnishes and resins, which are applied to the fingernails.

Document DE 200 14 372 discloses a device for beauty treatment of limbs including a first support for at least one limb portion fit for allowing an operator to operate on said portion by using tools, products and material and it includes aspirator means fit to suck air with powders and/or vapors of products used for the beauty treatment of limbs and fit to reintroduce the purified air in the environment. The device further includes a set of lamps for the treatment of the limb portion or for working on products applied to the limb

DISCLOSURE OF THE INVENTION

An object of the present invention is to propose a device for beauty treatment of limbs, which is portable and fit to allow an operator to execute a sequence of several different beauty treatment operations of hands, feet or other portions of human body, in a fast and rational way.

Other object is to propose a device fit to suck powders coming by working false nails, to purify fumes and gases produced by varnishes and the like applied to the fingernails and to facilitate application, hardening and removal of said nail varnishes.

The above-mentioned objects are achieved in accordance with the claim content.

#### BRIEF DESCRIPTION OF THE DRAWINGS

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The characteristics of the invention are underlined in the following, with particular reference to the attached drawings, in which:

- figures 1, 2 and 3 show respectively front, side and back views of the device for beauty treatment of limbs of the present invention;
- 10 - figure 4 shows an axonometric enlarged exploded view of the device of figure 1;
- figures 5 and 6 show respectively front and back axonometric views of a variant of device of figure 1;
- figure 7 shows a back view of device of figure 5.

#### 15 BEST MODE OF CARRYING OUT THE INVENTION

With reference to figures 1 to 4, numeral 1 indicates the device for beauty treatment of limbs of the present invention, which is provided with:

- a first support 2 for at least one hand, foot or other body portions, fit to allow an operator
- 20 to work on said hand with tools, products and material;
- aspirator means 3 capable to suck air with powders and/or with vapors of products used for the beauty treatment of hand and to reintroduce the purified air in the environment;
- a set of lamps 4 for the treatment of hand or products applied to the hand;
- a timer 5 to fix at least the lighting time of lamps 4.

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In an operating condition P in which base means 6 of device 1, consisting for instance of feet with rubber plugs, mate a nearly flat and horizontal surface, for instance a work table surface, the aspirator means 3 is positioned below the first support 2 an edge 7 thereof is close and facing a portion of aspirator means 3.

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The first support 2 has a convex shape and a surface adequate for supporting two hands or feet with the fingernails positioned at said edge 7 and therefore facing the aspirator means 3

that comprise a motorized fan 8 associated to filtering means 9 for instance including activated carbon and porous paper to stop powders or vapors produced by filing or painting the nails.

5 In the operating condition P, the upper portion of filtering means 9 defines a second support 10 almost horizontal and eventually usable for objects, such as brushes or spatulas, soaked with nail varnish or fresh resins.

The lamps 4 are preferably four of number and they are housed in a cavity 11, for at least a hand and carried out in the back portion of device, below the first support 2.

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The invention provides that one or more lamps 4 are inclined for a uniform illumination of the nails.

15 The lamps 4 have an emission of light, for instance ultraviolet, with spectrum suitable for the polymerization or hardening of products applied to the fingernails or fit for beauty treatment of skin or fingernails.

The device 1 includes two removable containers 12, housed in respective seats carried out at the side of and under the first support 2, for the products used for beauty treatment of hand, 20 for instance water, creams or other.

The device 1 is also provided with support means 13 for the wrist adjacent to removable containers 12 in such a way that a person can hold the fingers in the containers 12 without efforts.

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A couple of handles 16, extending from the first support 2 allow easily moving the device so making easier the transport thereof.

30 In order to make easier to remove nail varnishes, resins and the like from the fingernails or to remove false fingernails, the device 1 include ultrasonic means, known and not shown, for instance including piezoelectric crystals associated to respective containers, not shown, for a liquid such as water or a solvent, in which to dip the fingers. It is also provided that said

containers may consist of the removable containers 12.

A timer 5 controls the ultrasonic means in order to regulate the duration of the ultrasonic emission.

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The body parts of device 1 are preferably made of plastic material by injection molding.

A possible operation of device 1 provides that an operator effects beauty treatment, for instance manicure of hands or feet positioned on the first support 2 whose convex shape is comfortable both for the customer and for the operator. The possible powder, for instance  
10 generated by filing the natural or false nails, is sucked and retained by the aspirator means 3.

The removal of old nail varnishes or false nails can also be facilitated by dipping the fingernails in the liquid of the container of the ultrasonic means in an activation condition  
15 thereof by the timer 5.

The application of nail varnishes, resins and similar is carried out on the fingernails of hands positioned on the first support 2 in such a way that the vapors and the produced gases, are sucked by the aspirator means 3.

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The position of fingers in the cavity 11, in an activation condition of lamps 4 by the timer 5, allows obtaining a fast hardening of nail varnish or resin applied to the nails.

Figures 5 to 7 show a variant of the device for beauty treatment of limbs of the present invention, which includes a switchboard 20 provided with three on-off push buttons 21, one  
25 power supply jack 22 and one rheostat 23 for controlling the electric power at jack 22. Said power is delivered by a supply transformer, of known type and not shown in the figures, which is provided for powering external tools and means such as a cutter.

30 The variant further comprises an eyelid portion 24 at the upper external edge of cavity 11 which protects the lamps 4 against collisions and impacts and hinged portions 25 of the device side walls, which can be opened for reaching an inner volume of device 1 fit for

storage of beauty treatment products.

Another variant of the device, which is not shown in the figures, includes inner fan means, whose outlet flows into the cavity 11 and which are fit for drying and hardening the products applied to the fingernails, and a drawer means for containing products for treatment use which can be extracted from the cavity 11.

The main advantage of the present invention is to provide a device for beauty treatment of hand, which is portable and fit to allow an operator to perform a sequence of several treatment operations of hand in a fast and rational way.

Other advantage is to provide a device fit to suck and to purify fumes and gases produced by nail varnishes and the like applied to the fingernails and to facilitate the application, the hardening and the removal of said nail varnishes.

## CLAIMS

1) Device for beauty treatment of limbs including at least:

- a first support (2) for at least one limb portion fit for allowing an operator to operate on said portion by using tools, products and material;
- aspirator means (3) fit to suck air with powders and/or vapors of products used for the beauty treatment of limbs and fit to reintroduce the purified air in the environment;
- a set of lamps (4) for the treatment of the limb portion or for working on products applied to the limb;

in an operating condition (P) in which base means (6) of device (1) mate an almost plain and horizontal surface, the aspirator means (3) is below the first support (2) an edge (7) thereof is close and facing a portion of aspirator means (3) that include at least a motorized fan (8) associated to filtering means (9); said device (1) being characterized in that in operating condition (P), the upper portion of filtering means (9) defines a second support (10).

2) Device according to claim 1 characterized in that the first support (2) has a convex shape and a surface adequate to support two hands or feet.

3) Device according to claim 1 characterized in that the set of lamps (4) is housed in a cavity (11) for at least one hand or foot.

4) Device according to claim 1 characterized in that the lamps (4) have a light emission of suitable spectrum for the polymerization or hardening of products applied to the nails.

5) Device according to claim 1 characterized in that includes removable containers (12) for the products used for beauty treatment of limbs.

6) Device according to claim 5 characterized in that includes support means (13) for the wrist adjacent to the removable containers (12).

- 7) Device according to claim 1 characterized in that include ultrasonic means for making easier to remove false nails, nail varnishes, resins and similar from the fingernails.
- 8) Device according to claim 7 characterized in that the ultrasonic means are associated to a container for a liquid and for the fingernails to be cleaned.
- 9) Device according to the claim 7 characterized in that it includes a timer (5) controlling the ultrasonic means.
- 10) Device according to claim 1 characterized in that includes at least a handle (16).
- 11) Device according to claim 1 characterized in that further includes a switchboard (20) provided at lest with one on-off button (21), one power supply jack (22) and one rheostat (23).
- 12) Device according to claim 11 characterized in that further includes a supply transformer, for powering external tools through supply jack (22).
- 13) Device according to claim 6 characterized in that further comprises an eyelid portion (24) at the upper external edge of cavity (11) for protecting the lamps (4) against collisions and impacts.
- 14) Device according to claim 1 characterized in that further comprises hinged portions (25) of the device side walls.
- 15) Device according to claim 3 characterized in that further comprises inner fan means, whose outlet flows into the cavity (11) and which are fit for drying and hardening the products applied to the fingernails.
- 16) Device according to claim 3 characterized in that further comprises drawer means for containing products for treatment which can be extracted from the cavity (11).

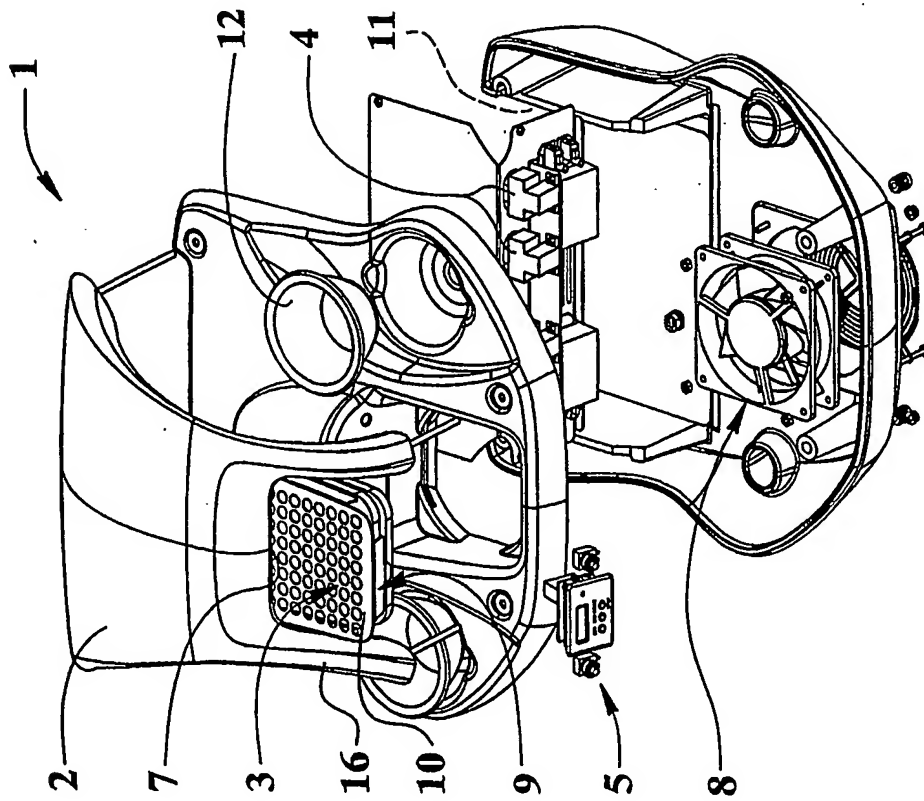
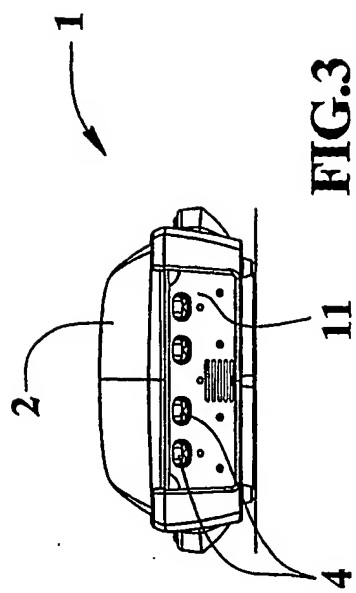
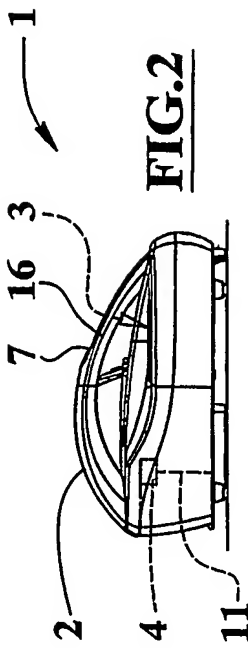
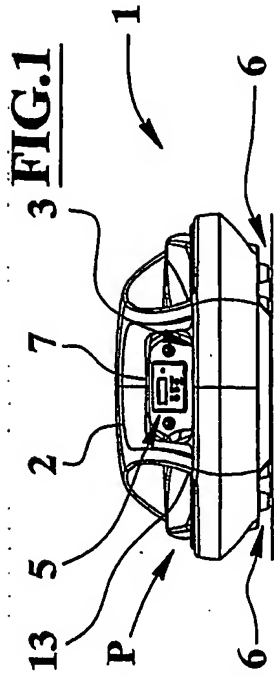
- 17) Device according to claim 9 characterized in that the timer (5) at least controls the lighting time of lamps (4)



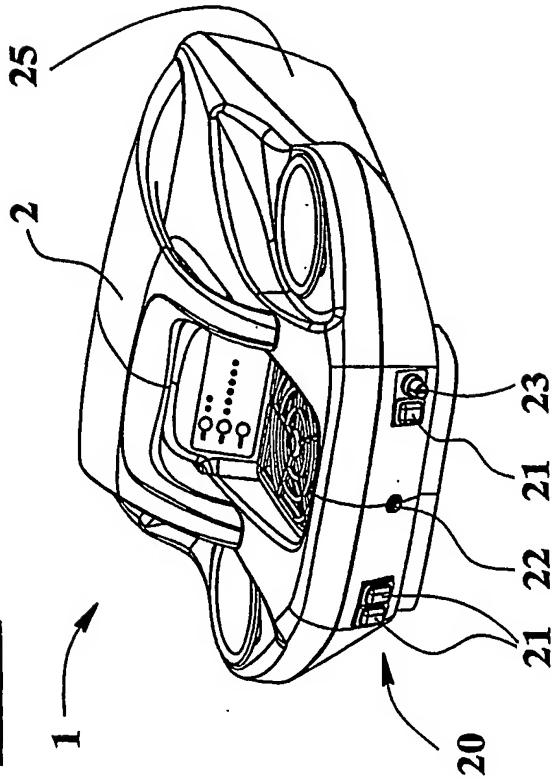
**ABSTRACT**

A device for beauty treatment of limbs includes at least:

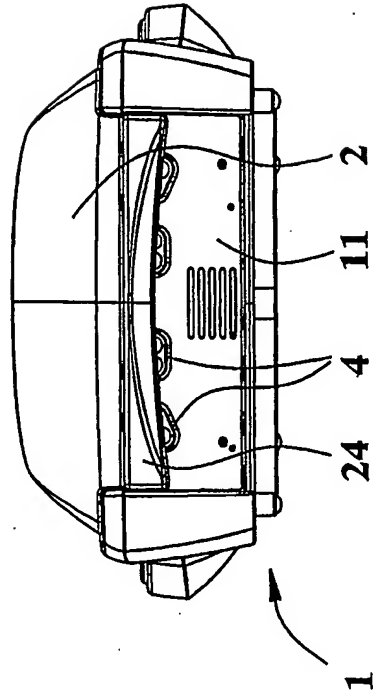
- 5       -       a first support (2) for at least one limb portion fit for allowing an operator to operate  
          on said portion by using tools, products and material;
- aspirator means (3) fit to suck air with powders and/or vapors of products used for  
          the beauty treatment of limbs and fit to reintroduce the purified air in the  
          environment;
- 10       -       a set of lamps (4) for the treatment of the limb portion or for working on products  
          applied to the limb.



**FIG.5**



**FIG.7**



**FIG.6**

